National Institute of Environmental Health Sciences

Can plants growing in diverse hostile environments provide a vital source of anticancer drugs?

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Year: 2014
Journal: Cancer Therapy. 10: 13-37

Abstract:

The therapeutic use of plants against critical human illnesses predates recorded history and represents the most significant direct antecedent to modern medicine. With the advances of various in-silico technologies, the introduction of plant derived bioactive agents into the cancer armamentarium has changed the natural history of many types of human cancer. In spite of numerous advances in the field of cancer research, the world still continues to be in the grip of this dreadful disease and there is an urgent need to design well tolerated anti-cancer therapeutic agents. Numerous plants have the potential of anticancer activity but are still to be investigated. However, existing flora is so vast that it is humanly impossible to investigate each and every plant for anti-cancer activity. Increasing global warming, malnutrition and various environmental insults continue to increase the incidences of cancer. "Cancer is hostile to human body and hostile environment is cancerous to plants". Accordingly, those plants which are able to comfortably survive under multiple but diverse hostile environments may act as a vital source of anti-cancer agents. Moreover, these anticancer agents are likely to be safe by virtue of being of natural origin. Various plants reported/studied for anticancer activity till date have been briefly reviewed in the present article. An urgent need for screening plants surviving in diverse hostile environments for anticancer activity has been emphasized so as to accelerate development of effective but safe anticancer drugs.

Source:
https://web.archive.org/web/20150205224617/http://cancer-therapy.org/CT/v10/A/2.Madan_et_al_13-37.pdf

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Ecosystem Changes

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Global or Unspecified

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Cancer

Resource Type: ☑

format or standard characteristic of resource

Review

Timescale: ☑

time period studied

Time Scale Unspecified